

We claim:

1. A wireless communication device, comprising:  
5 a controller to control of transmission of data; and  
a rate fallback mechanism that reduces a retransmission rate only for a current frame when an acknowledgement is not received for said current frame.
2. The wireless communication device of claim 1, wherein said retransmission rate  
10 is not reduced until a predefined number of equal rate attempts have been performed.
3. The wireless communication device of claim 1, wherein a transmission rate for a subsequent frame is selected based on an available signal quality.
- 15 4. The wireless communication device of claim 1, wherein said retransmission rate is progressively reduced until an acknowledgement is received for said current frame or a retry count for said current frame is exceeded.
5. The wireless communication device of claim 1, wherein said retransmission rate  
20 is selected from a table of available rates.
6. The wireless communication device of claim 5, wherein said table of available rates is populated with at least a portion of rates supported by a receiving station.
- 25 7. The wireless communication device of claim 1, wherein said retransmission rate is determined by an algorithm that selects said retransmission rate based on current conditions.
8. The wireless communication device of claim 1, wherein said device is implemented in accordance with the IEEE 802.11 Standard.

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9. The wireless communication device of claim 1, wherein said rate fallback mechanism restores a transmission rate that was in use before said retransmission rate was reduced.

5 10. The wireless communication device of claim 1, wherein said rate fallback mechanism proceeds directly to a fallback state if a signal quality is not sufficient to support a data rate associated with an equal rate retry.

11. A method for wireless communication, comprising the steps of:  
10 transmitting one or more frames; and  
reducing a retransmission rate only for a current frame when an acknowledgement is not received for said current frame.

12. The method of claim 11, further comprising the step of performing a number of  
15 equal rate attempts before performing said reducing step.

13. The method of claim 11, further comprising the step of selecting a transmission rate for a subsequent frame based on an available signal quality.

20 14. The method of claim 11, wherein said reducing step is performed iteratively until an acknowledgement is received for said current frame or a retry count for said current frame is exceeded.

15. The method of claim 11, wherein said reducing step further comprises the step of  
25 selecting said retransmission rate from a table of available rates.

16. The method of claim 15, wherein said table of available rates is populated with at least a portion of rates supported by a receiving station.

17. The method of claim 11, wherein said reducing step further comprises the step of selecting said retransmission rate based on current conditions.

18. The method of claim 11, wherein said method is performed in accordance with the IEEE 802.11 Standard.

19. The method of claim 11, further comprising the step of restoring a transmission rate that was in use before said retransmission rate was reduced.

20. The method of claim 11, wherein said reducing step proceeds directly to a fallback state if a signal quality is not sufficient to support a data rate associated with an equal rate retry.

21. A wireless communication device, comprising:  
a controller to control of transmission of data; and  
a rate fallback mechanism that reduces a retransmission rate for a current frame when an acknowledgement is not received for said current frame and increases said transmission rate for a subsequent frame.

22. The wireless communication device of claim 21, wherein said retransmission rate is not reduced until a predefined number of equal rate attempts have been performed.

23. The wireless communication device of claim 21, wherein a transmission rate for a subsequent frame is selected based on an available signal quality.

24. The wireless communication device of claim 21, wherein said retransmission rate is progressively reduced until an acknowledgement is received for said current frame or a retry count for said current frame is exceeded.

25. The wireless communication device of claim 21, wherein said rate fallback mechanism restores a transmission rate that was in use before said retransmission rate was reduced.